

# EXHIBIT F

**From:** Tony Nguyen <tonytn@uw.edu>  
**Sent:** Monday, November 23, 2020 8:55 AM  
**To:** Aaron J. Wirsing; Andrew Burich; Carolyn M. Malinowski; David L. Mack; Farrel R. Robinson; Garret Stuber; Jacqui Ague; Jane Sullivan; Jeanot Muster; Kathryn Guerriero; Ken Gordon; Kim Stocking; uworama; Michael Krasik; Michelle Brot; mkluucas; J.Preston Van Hooser; Scott Haskell; Steve Libby  
**Cc:** achris08; Amber L. Fuller; Ashley E. Williams; Aubrey Schoenleben; Bob Ennes; Robert D Murnane; Charlotte E. Hotchkiss; Chris Braunger; Daniel Eldridge; Dean Jeffery; Eleanor Wade; Emily W. Clark; George E. Sanders; Jennifer Freeling Iwamoto; Judy L Cashman; Kelly Heffernan; Kristin Zabrecky; Leandra Mosca; Loren M Kinman; Mariam W. Ashmawi; megellis; Melissa Barker-Haliskij; Michael Oppenheimer; stephh26  
**Subject:** A message to the IACUC  
**Attachments:** Benefit Story November 2020.docx

Hello everyone,

Please see Jane's message below.

Thanks,  
Tony

Fellow members of the IACUC, I stand corrected. The Moderna vaccine is not the same as the Fuller lab vaccine. Please see the attached Benefit story, which will be posted with our November minutes. Thank you and take care, Jane

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Jane M Sullivan, Ph.D.  
Associate Professor  
Dept. of Physiology & Biophysics  
University of Washington School of Medicine  
1705 NE Pacific St  
Box 357290  
Seattle, WA 98195

Office G413 Ph. (206) 543-4038  
Lab H204 Ph. (206) 685-9424

I am again going to focus this month's benefit story on local efforts to develop a Covid vaccine. First, I want to update you about the Fuller lab's novel RNA-based vaccine, which I told you about in August. This is the Moderna vaccine, which was reported earlier this week to be 94.5% effective in Phase 3 clinical trials that ran in parallel with the monkey research. [*Correction: the Fuller lab vaccine is not the same as the Moderna vaccine.*] This is tremendously exciting news.

I think most of you are aware, though, that the global goal is to identify a variety of vaccines with different properties, and so the need for further vaccine testing continues.

Neil King's lab, working in collaboration with many fellow UW researchers, has very recently reported their findings on a different kind of vaccine in the journal *Cell*. The King group began by generating a computer model that predicts the 3-dimensional shape of the part of the SARS-CoV-2 virus where it binds to ACE2, the naturally occurring cell-surface protein that serves as an entry receptor for the virus. This allowed the researchers to predict the part of SARS-CoV-2 where antibody binding could most effectively block binding to ACE2, and thus block entry of the virus into cells.

The key concept here is that exposure to the isolated protein binding domain, which on its own does not cause disease, triggers the production of antibodies that will attach to the binding domain and prevent infection by the virus upon exposure. In vitro studies showed that simultaneously presenting multiple copies of the binding domain was much more effective at triggering antibody production than individual binding domains. This led the researchers to create so-called 'nanobodies' that are composed of aggregates of recombinant SARS-CoV-2 binding domain protein.

When these nanobodies were injected intramuscularly into mice, they rapidly elicited antibodies at levels that matched or exceeded the levels found in humans with COVID. Seven weeks after immunization, *all* the mice injected with the nanobodies were **completely protected** from detectable virus replication in the lungs and nasal tissue, and high antibody titers persisted undiminished out to 24 weeks.

Follow up studies in mice with humanized immune systems provided additional confidence that the nanobodies would work in people, but a final experiment tested the ability of the nanobodies to elicit antibodies in a single non-human primate. Eight weeks after immunization, the monkey's serum contained high levels of antibodies that could inhibit binding of virus to ACE2 in an in vitro assay. I do want to emphasize that there was no virus challenge for the monkey, and also that **none** of the monkeys at the UW primate center have tested positive for COVID.

The benefits of nanobody vaccines include their track record for safety and their potency, which means a little can go a long way. Nanobody vaccines are also amenable to large-scale manufacturing, which is particularly important during a global pandemic. I am excited to see how this new nanobody vaccine performs in clinical trials.

Walls et al., 'Elicitation of Potent Neutralizing Antibody Responses by Designed Protein Nanoparticle Vaccines for SARS-CoV-2' *Cell* 183: 1-16 (2020)

**From:** Jane Sullivan <jmsull@uw.edu>  
**Sent:** Monday, November 23, 2020 8:32 AM  
**To:** Tony Nguyen  
**Cc:** Kim Stocking; Bob Ennes  
**Subject:** a message to the IACUC  
**Attachments:** Benefit Story November 2020.docx

Good morning, Tony. Can you please remove my message to you and then forward the email below, including the attachment, to the IACUC? I want to be sure they are aware of the correction to the benefit story before I send it to Lisa. Thank you, Jane

Fellow members of the IACUC, I stand corrected. The Moderna vaccine is not the same as the Fuller lab vaccine. Please see the attached Benefit story, which will be posted with our November minutes. Thank you and take care, Jane

-----  
Jane M Sullivan, Ph.D.  
Associate Professor  
Dept. of Physiology & Biophysics  
University of Washington School of Medicine  
1705 NE Pacific St  
Box 357290  
Seattle, WA 98195

Office G413 Ph. (206) 543-4038  
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Walls et al., 'Elicitation of Potent Neutralizing Antibody Responses by Designed Protein Nanoparticle Vaccines for SARS-CoV-2' *Cell* 183: 1-16 (2020)

**From:** Tony Nguyen <tonytn@uw.edu>  
**Sent:** Tuesday, January 26, 2021 8:53 AM  
**To:** Bob Ennes  
**Subject:** FW: President Cauce Letter to PETA  
**Attachments:** 2020.12.15 AMC Message to PETA\_WaNPRC.pdf

Hi Bob, this is the email I sent to the IACUC.

Thanks,  
Tony

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**From:** Tony Nguyen  
**Sent:** Wednesday, December 16, 2020 12:59 PM  
**To:** Aaron J. Wirsing <wirsinga@uw.edu>; Andrew Burich <aburich@benaroyaresearch.org>; Carolyn M. Malinowski <cmali@uw.edu>; David Mack <dmack21@uw.edu>; Farrel (Ric) Robinson <robinsn@uw.edu>; Garret Stuber <gstuber@uw.edu>; Jacqui Ague <jacqui.ague@seattlechildrens.org>; Jane Sullivan <jmsull@uw.edu>; Jeanot Muster <musterj@uw.edu>; Kathryn Guerriero <kag18@uw.edu>; Ken Gordon <executivedirector@nwabr.org>; Kim Stocking <kstock@uw.edu>; Michael Krasik <uworama@uw.edu>; Michael Krasik <motekinc@earthlink.net>; Michelle Brot <mbrot@uw.edu>; Molly Lucas <mklucas@uw.edu>; Preston Van Hooser <jpvh@uw.edu>; Scott Haskell <srrhaskell@gmail.com>; Steve Libby <slibby@uw.edu>  
**Cc:** achris08 <achris08@uw.edu>; Amber L. Fuller <aw656@uw.edu>; Ashley E. Williams <aew33@uw.edu>; Aubrey Schoenleben <aubreys@uw.edu>; Bob Ennes <ennes@uw.edu>; Bob Murnane <rmurnane@uw.edu>; Charlotte E. Hotchkiss <chotckki@uw.edu>; Chris Braunger <chrisb44@uw.edu>; Daniel Eldridge <deldrid@uw.edu>; Dean Jeffery <daj12@uw.edu>; Eleanor Wade <ewade1@uw.edu>; Emily Clark <ewilkins@uw.edu>; George Sanders <gsander@uw.edu>; Jennifer Freeling Iwamoto <jpf2@uw.edu>; Judy Cashman <judym@uw.edu>; Kelly Heffernan <ksh@uw.edu>; Kristin Zabrecky <zabrecky@uw.edu>; Leandra Mosca <lmosca@uw.edu>; Loren Kinman <lorax@uw.edu>; Mariam W. Ashmawi <mariam18@uw.edu>; megellis <megellis@uw.edu>; Melissa Barker-Haliski <mhaliski@uw.edu>; Michael Oppenheimer <moppenh@uw.edu>; stephh26 <stephh26@uw.edu>; Sally Thompson-Iritani <sti2@uw.edu>; Kelly Morrisroe <morrisro@uw.edu>  
**Subject:** President Cauce Letter to PETA

Hello everyone,

Please see Kim's message below.

Thanks,  
Tony

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**From:** Kim Stocking [<mailto:kstock@uw.edu>]  
**Sent:** Wednesday, December 16, 2020 12:54 PM  
**Subject:** Please send out to IACUC member list

Please see the attached President Cauce letter to PETA in support for the Primate Center. Feel free to share with other faculty, staff, and students.

Thanks,  
Kim

**Kim Stocking, DVM, DACLAM**

Attending Veterinarian

Director, Office of Animal Welfare

Health Sciences Building Box 357160

1705 NE Pacific Street Seattle, WA 98195-7160

206.543.2211 fax 206.616.1297

[kstock@uw.edu](mailto:kstock@uw.edu) / [oaw.washington.edu](http://oaw.washington.edu)



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*Dare 2 Care...* | explore [UW's Compassion Fatigue Program](#)



UNIVERSITY of WASHINGTON

*Ana Mari Cauce*  
*Professor of Psychology*  
PRESIDENT

December 15, 2020

Kathy Guillermo  
[KathyG@peta.org](mailto:KathyG@peta.org)  
Senior Vice President  
Laboratory Investigations Department  
People for the Ethical Treatment of Animals  
501 Front St., Norfolk, VA 23510

Dear Kathy,

I am writing in response to your letters to my office and the University of Washington (UW) campus community concerning the UW's National Primate Research Center (WaNPRC).

As the President of the University of Washington, a scientist, and an individual, I hope for the day when the use of animals for critical health research is no longer scientifically necessary or justified.

That day is not today. While University of Washington scientists first employ every alternative to animals in their research, including cell culture, tissues, computer simulation and modeling, some vital research questions can only be answered by studying a living animal. The WaNPRC is a necessary resource in those cases. The University of Washington uses non-human primates prior to conducting clinical trials in humans, and the information gained from animal research is vital as we seek to develop safe and effective treatments and biologics that save lives, such as COVID-19 vaccines. Our research has made important, timely contributions in the development of vaccines for protection against a wide range of infectious diseases including malaria, SARS-CoV-2 and HIV, antiviral drugs that can provide protection from HIV disease and transmission, new drugs to combat cancer, therapeutics to improve vision and neural function, as well as nerve and heart muscle regeneration.

In addition to important ethical considerations and questions, you correctly highlight that managing the WaNPRC at the highest standards is an administratively complex endeavor that requires leadership of the highest caliber. To that end, our mandate for WaNPRC is to perform this function effectively and to the highest standards. Where we fall short, we demand



transparency. Achieving the highest standards requires continuous improvement. The University has spent considerable time and effort in the last year, at the direction of the Provost, reviewing and evaluating our funding and management of WaNPRC. We made changes to its structure and leadership, including hiring Dr. Sally Thompson-Iritani. She and her staff have my full backing and support. Under her leadership, WaNPRC processes and procedures have been reviewed to ensure we employ the highest standards of care that are up to date, reviewed and supported by a panel of expert scientists. If adverse events occur, we promptly respond by reviewing our procedures, self-reporting to the appropriate regulatory agencies and identifying areas to be modified to prevent future occurrences.

I understand that PETA is an organization that does not believe in using animals – under any circumstances – to further important biomedical research that ultimately saves or improves the lives of both humans and animals. PETA has a right to their position, and I respect that. What I do not respect are PETA's tactics. PETA fundamentally misrepresents our research and animal care and ignores that this research is transparent and heavily regulated. PETA also routinely resorts to harassment of University staff and faculty who have dedicated their lives and careers to improving health of our communities while upholding our high ethical standards and animal welfare.

I want to confirm the University will submit the P51 grant to the National Institute of Health. I also want to offer that my commitment to advancing alternatives to animal research is sincere. If PETA would like to end their harassing tactics, and meaningfully engage in how we can invest and advance alternatives to animals in research, I remain open to dialogue. Current tactics do not allow for meaningful engagement, so the University will continue to advance work in this area with our faculty experts and other willing partners.

Thank you,

A handwritten signature in black ink that reads "Ana Mari Cauce". The signature is written in a cursive, flowing style.

Ana Mari Cauce  
President  
Professor of Psychology

**From:** Tony Nguyen <tonytn@uw.edu>  
**Sent:** Wednesday, December 16, 2020 1:03 PM  
**To:** Kim Stocking  
**Cc:** Jane Sullivan; Bob Ennes; Sally Thompson-Iritani  
**Subject:** RE: Please send out to IACUC member list

Hi Kim,

I just sent the letter to the IACUC. I noticed you uploaded in the letter in HoverBoard.

Thanks,  
Tony

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**From:** Kim Stocking [mailto:kstock@uw.edu]  
**Sent:** Wednesday, December 16, 2020 12:54 PM  
**To:** Tony Nguyen <tonytn@uw.edu>  
**Cc:** Jane Sullivan <jmsull@uw.edu>; Bob Ennes <ennes@uw.edu>; Sally Thompson-Iritani <sti2@uw.edu>  
**Subject:** Please send out to IACUC member list

Hi Tony,  
Could you please send out the following message and attached letter to all IACUC members (regular and alternates)?

Please see the attached President Cauce letter to PETA in support for the Primate Center. Feel free to share with other faculty, staff, and students.

Thanks,  
Kim

Kim Stocking, DVM, DACLAM  
Attending Veterinarian  
Director, Office of Animal Welfare

Health Sciences Building Box 357160  
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206.543.2211 fax 206.616.1297  
[kstock@uw.edu](mailto:kstock@uw.edu) / [oaw.washington.edu](http://oaw.washington.edu)



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AB8FC  
924D1  
E41BF  
866C54  
D99A9  
22222

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**From:** Jane Sullivan <jmsull@uw.edu>  
**Sent:** Thursday, November 19, 2020 4:26 PM  
**To:** Sally Thompson-Iritani; Kim Stocking; Ashley E. Williams  
**Subject:** Error in my Benefit Story  
**Attachments:** Benefit Story November 2020.docx

Hello, Sally, Kim & Ashley—As Sally just suggested to me, the Fuller lab vaccine is NOT the same as the Moderna vaccine. I don't know exactly how I managed to make that mistake, but I do note that Deb participated in a number of panels, and was interviewed for articles on the Moderna vaccine, and it wasn't until I read everything closely that I saw that she was working with a different Seattle company. I have noted this error in the revised Benefit Story that I have attached. Lisa has email to follow up, and I thought I would respond as shown below. Please let me know your thoughts about how I have corrected the record and plan to respond to Lisa. Thanks for help with this and my apologies for making a mess—Jane

LJE:

Jane—

It sounded to me like you said that Deb Fuller's preclinical study back in Mar/April, which repurposed 5 of the monkeys from her Hepatitis study, was directly responsible for the Moderna vaccine. Did I misunderstand you?

**Lisa Jones-Engel, PhD**

Senior Science Advisor, Primate Experimentation

Laboratory Investigations Department

People for the Ethical Treatment of Animals

[LisaJE@peta.org](mailto:LisaJE@peta.org)

206.372.6190

JMS draft response:

Hi, Lisa—I am embarrassed to admit that I was the one who misunderstood the articles I read this week. The Fuller group's vaccine is not the same as the Moderna vaccine. I am attaching the Benefit Story that we will post with the meeting minutes, where I acknowledge the error. Take care, Jane

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Jane M Sullivan, Ph.D.  
Associate Professor  
Dept. of Physiology & Biophysics  
University of Washington School of Medicine  
1705 NE Pacific St  
Box 357290  
Seattle, WA 98195

Office G413 Ph. (206) 543-4038  
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I think most of you are aware, though, that the global goal is to identify a variety of vaccines with different properties, and so the need for further vaccine testing continues.

Neil King's lab, working in collaboration with many fellow UW researchers, has very recently reported their findings on a different kind of vaccine in the journal *Cell*. The King group began by generating a computer model that predicts the 3-dimensional shape of the part of the SARS-CoV-2 virus where it binds to ACE2, the naturally occurring cell-surface protein that serves as an entry receptor for the virus. This allowed the researchers to predict the part of SARS-CoV-2 where antibody binding could most effectively block binding to ACE2, and thus block entry of the virus into cells.

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Walls et al., 'Elicitation of Potent Neutralizing Antibody Responses by Designed Protein Nanoparticle Vaccines for SARS-CoV-2' *Cell* 183: 1-16 (2020)

**From:** Sally Thompson-Iritani  
**Sent:** Tuesday, November 24, 2020 10:56 AM  
**To:** Tina M. Mankowski  
**Subject:** FW: Dishonest claim made at an official University of Washington meeting regarding the development of Moderna's COVID-19 vaccine

Fyi -

*Thank you -*

*Sally Thompson-Iritani, DVM/PhD, CPIA*  
*~ Certified Compassion Fatigue and Human-Animal Bond Practitioner ~*  
**Director (Interim), WaNPRC**  
206.661.6294 /[sti2@uw.edu](mailto:sti2@uw.edu)

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**From:** Deborah L Fuller <[fullerdh@uw.edu](mailto:fullerdh@uw.edu)>  
**Sent:** Tuesday, November 24, 2020 9:01 AM  
**To:** Sally Thompson-Iritani <[sti2@uw.edu](mailto:sti2@uw.edu)>  
**Subject:** Re: Dishonest claim made at an official University of Washington meeting regarding the development of Moderna's COVID-19 vaccine

I'm not concerned at all. They are blowing this way out of proportion which, in my estimation, is more injurious to their credibility than ours.

Deb

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**From:** Sally Thompson-Iritani <[sti2@uw.edu](mailto:sti2@uw.edu)>  
**Date:** Tuesday, November 24, 2020 at 8:57 AM  
**To:** "[fullerdh@uw.edu](mailto:fullerdh@uw.edu)" <[fullerdh@uw.edu](mailto:fullerdh@uw.edu)>  
**Subject:** RE: Dishonest claim made at an official University of Washington meeting regarding the development of Moderna's COVID-19 vaccine

Hi Deb – this was an error on Jane's part and she corrected it. Let me know if you want to discuss.

*Thank you -*

*Sally Thompson-Iritani, DVM/PhD, CPIA*  
*~ Certified Compassion Fatigue and Human-Animal Bond Practitioner ~*  
**Director (Interim), WaNPRC**  
206.661.6294 /[sti2@uw.edu](mailto:sti2@uw.edu)

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**From:** Deborah L Fuller <[fullerdh@uw.edu](mailto:fullerdh@uw.edu)>  
**Sent:** Tuesday, November 24, 2020 8:44 AM  
**To:** Sally Thompson-Iritani <[sti2@uw.edu](mailto:sti2@uw.edu)>  
**Subject:** FW: Dishonest claim made at an official University of Washington meeting regarding the development of Moderna's COVID-19 vaccine

FYI..

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**From:** "Dr. Lisa Jones-Engel" <[LisaJE@peta.org](mailto:LisaJE@peta.org)>

**Date:** Tuesday, November 24, 2020 at 8:41 AM

**To:** "[Elisabeth.Handley@hhs.gov](mailto:Elisabeth.Handley@hhs.gov)" <[Elisabeth.Handley@hhs.gov](mailto:Elisabeth.Handley@hhs.gov)>

**Subject:** RE: Dishonest claim made at an official University of Washington meeting regarding the development of Moderna's COVID-19 vaccine

November 24, 2020

Elisabeth Handley  
Director  
Office of Research Integrity  
Department of Health and Human Services  
1101 Wootton Pkwy, Suite 240

Via e-mail: [Elisabeth.Handley@hhs.gov](mailto:Elisabeth.Handley@hhs.gov)

RE: Dishonest claim made at an official University of Washington meeting regarding the development of Moderna's COVID-19 vaccine

Dear Ms. Handley:

I hope this correspondence, written on behalf of People for the Ethical Treatment of Animals (PETA) and our more than 6.5 million members and supporters, finds you well. Prior to joining the staff at PETA, I was a Senior Research Scientist at the Washington National Primate Research Center (WaNPRC) at the University of Washington (UW) and then served for two years on UW's Institutional Animal Care and Use Committee (IACUC)—the committee charged with ensuring ethical treatment of animals in the university's laboratories. At PETA, I serve as Senior Science Advisor of Primate Experimentation, and it was in this capacity that I attended the virtual meeting of the UW IACUC on November 19, 2020.

At this meeting, Jane Sullivan, the UW IACUC Chair, made a dishonest claim that experiments carried out on pigtail macaques by Deborah Fuller, a UW/WaNPRC investigator, were directly responsible for the development of Moderna's vaccine for Covid-19. As I had been following news of the Moderna and other vaccines, I was aware that this claim was incorrect—and at the meeting, I requested clarification on this point. Dr. Sullivan refused to correct her statement and directed me to look at the IACUC meeting "minutes when the story is published."

However, in a follow-up email exchange with Dr. Sullivan, she recanted and agreed that the Moderna vaccine was not the same as the Fuller lab vaccine.


Misstatements, inappropriate representations, and out and out falsehoods—particularly when they occur in the context of issues as

sensitive as COVID-19 vaccines—are an egregious violation of the public trust. And if the misstatements made by Dr. Sullivan were made deliberately or at the behest of WaNPRC leadership hoping to scuttle concerns about mistreatment of primates in its laboratories, I believe this should be investigated.

I therefore respectfully request that you look into this matter. I would be happy to answer any questions you may have.

Thank you for your time and consideration.

Sincerely,



Lisa Jones-Engel, Ph.D.  
Senior Science Advisor of Primate Experimentation  
Laboratory Investigations Department  
People for the Ethical Treatment of Animals

Cc:

Stéphane Bancel, Chief Executive Officer, Moderna, Inc  
Stephen Hoge, President, Moderna, Inc  
Tal Zaks, Chief Medical Officer, Moderna, Inc  
Ana Marie Cauce, President, University of Washington (UW)  
Mark Richards, Provost and Executive Vice President, UW  
Mary E. Lidstrom, Vice Provost for Research, UW  
Joe Giffels, Associate Vice Provost for Research Administration & Integrity; Institutional Official, UW  
Paul Ramsey, CEO; Executive Vice President for Medical Affairs; Dean, School of Medicine, UW  
Deborah Fuller, Professor, UW  
Jane Sullivan, Chair, Institutional Animal Care and Use Committee, UW  
Kim Stocking, Director, Office of Animal Welfare; Attending Veterinarian, UW  
Sally Thompson-Iritani, Interim Director, Washington National Primate Research Center, UW  
Nate Fulton, Board of Trustees, UW  
Ben Franz-Knight, Board of Trustees, UW  
Kris Lambright, Board of Trustees, UW  
Erin McCallum, Board of Trustees, UW  
Amit D. Ranade, Board of Trustees, UW  
Paul Rucker, Board of Trustees, UW  
William S. Ayer, Board of Regents, UW  
Joel Benoliel, Board of Regents, UW  
Joanne R. Harrell, Board of Regents, UW  
Jeremy Jaech, Board of Regents, UW  
Libby G. MacPhee, Board of Regents, UW  
Kristina Pogolian, Board of Regents, UW  
Constance W. Rice, Board of Regents, UW  
Rogelio Riojas, Board of Regents, UW  
Blaine Tamaki, Board of Regents, UW  
David Zeeck, Board of Regents, UW

**From:** Sally Thompson-Iritani  
**Sent:** Friday, December 18, 2020 4:49 PM  
**To:** Tina M. Mankowski  
**Subject:** Re: [mediarelations] FW: New Scientist magazine re IACUC covid vaccine claims story

Also - maybe ask if he wants to talk about bullying, harassment and intimidation of people who take care of the animals used to support research. That could be an interesting story -

Thank you ~

Sally Thompson-Iritani, DVM/PhD, CPIA  
~ *Certified Compassion Fatigue and Human-Animal Bond Practitioner* ~  
Director (Interim) WaNPRC; 206.661.6294  
University of Washington, Seattle, WA  
*All typos courtesy of iPhone autocorrect*

On Dec 18, 2020, at 2:56 PM, Sally Thompson-Iritani <sti2@uw.edu> wrote:

Hi Tina – I put some notes below in blue. Is this really a story? You can just send them the corrected minutes.

*Thank you -*

*Sally Thompson-Iritani, DVM/PhD, CPIA  
~ Certified Compassion Fatigue and Human-Animal Bond Practitioner ~  
Director (Interim), WaNPRC  
206.661.6294 / [sti2@uw.edu](mailto:sti2@uw.edu)*

*'As staff at the University of Washington, I acknowledge the peoples – past, present, and future – of the Dkhw'Duw'Absh, the Duwamish Tribe, the Muckleshoot Tribe, and other Coast Salish peoples on whose traditional lands and waters I work.'*

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**From:** Tina M. Mankowski <ochs@uw.edu>  
**Sent:** Friday, December 18, 2020 2:04 PM  
**To:** Sally Thompson-Iritani <sti2@uw.edu>  
**Subject:** RE: [mediarelations] FW: New Scientist magazine re IACUC covid vaccine claims story  
**Importance:** High

See the question below and my answers. If these answers are correct, I can put this into a lucid statement.

Thanks!

**Tina Mankowski**

<image001.png>

**Senior Director, Internal Communications & Media Relations**  
Strategic Marketing & Communications | UW

---

**From:** mediarelations [<mailto:mediarelations-bounces@mailman12.u.washington.edu>] **On Behalf Of** UW News  
**Sent:** Friday, December 18, 2020 12:20 PM  
**To:** 'mediarelations@uw.edu'  
**Subject:** [mediarelations] FW: New Scientist magazine re IACUC covid vaccine claims story

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**From:** Adam Vaughan <[adam.vaughan@newscientist.com](mailto:adam.vaughan@newscientist.com)>  
**Sent:** Friday, December 18, 2020 6:03 AM



To: UW News <uwnews@uw.edu>

Subject: New Scientist magazine re IACUC covid vaccine claims story

Dear UW press office,

I'm a journalist at New Scientist magazine in the UK.

I'm writing regarding a request for comment and background on a story I'm exploring that relates to UW's primate centre, WaNPRC.

A video of a 19 November meeting of IACUC has been brought to my attention, which appears to show the committee's chair misleadingly conflating work on Deborah Fuller's vaccine with Moderna's vaccine. In the video I've seen, she says: "So first I want to update you about the Fuller Labs' novel RNA based vaccine which I told you about in August. This is the Moderna [covid] vaccine...").

My questions are:

- did WaNPRC have any role in the development of Moderna's vaccine? No
  - was the chair reading from a prepared statement, or speaking off the cuff? The chair was not reading from a prepared statement and her comment regarding Moderna and the Washington National Primate Center was made in error. The Chair does prepare her own benefit stories and reads those.
  - do you agree she conflated the two vaccines, Moderna's and Fuller's? Again, the statement was made in error and the chair has acknowledged her error and apologized. The statement was made in error and a correction went out to all IACUC members following the meeting. We can attached the corrected minutes.
  - was the conflation of the two vaccines deliberate, or a mistake? The statement was made in error. IT WAS MISTAKE
  - do you know how many people were watching her talk on 19 November, and who? We don't know exactly who or how many people typically watch our Institutional Animal Care and Use Committee meetings. They are open to the general public and we know that ~~animal rights organizations~~ are among those watching the proceedings. IACUC members we have a tally. **Extremists that are opposed to animal research** – maybe 10-12.
  - what is the status of research on the Fuller Labs' vaccine? [Need to find out] check with Deb
- I'm working to a deadline of 4pm GMT on Monday.

Look forward to hearing from you.

Best,

Adam

**Adam Vaughan** | Chief Reporter

T +442076111216

E adam.vaughan@newscientist.com

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**newscientist.com** | 4th Floor | 25 Bedford Street | London WC2E 9ES | UK

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**From:** Jane Sullivan <jmsull@uw.edu>  
**Sent:** Tuesday, November 24, 2020 10:28 AM  
**To:** Joe Giffels  
**Cc:** Kim Stocking; Sally Thompson-Iritani  
**Subject:** RE: A message to the IACUC

Thanks, Joe. That was certainly my intention. Take care, Jane

---

Jane M Sullivan, Ph.D.  
Associate Professor  
Dept. of Physiology & Biophysics  
University of Washington School of Medicine  
1705 NE Pacific St  
Box 357290  
Seattle, WA 98195

Office G413 Ph. (206) 543-4038  
Lab H204 Ph. (206) 685-9424

---

**From:** Joe Giffels <jgiffels@uw.edu>  
**Sent:** Tuesday, November 24, 2020 10:21 AM  
**To:** Jane Sullivan <jmsull@uw.edu>  
**Cc:** Kim Stocking <kstock@uw.edu>; Sally Thompson-Iritani <sti2@uw.edu>  
**Subject:** RE: A message to the IACUC

Thanks very much, Jane. In my opinion, you took timely and appropriate measures.

Joe

JOE GIFFELS

---

**From:** Jane Sullivan <jmsull@uw.edu>  
**Sent:** Tuesday, November 24, 2020 10:09 AM  
**To:** Joe Giffels <jgiffels@uw.edu>  
**Cc:** Kim Stocking <kstock@uw.edu>; Sally Thompson-Iritani <sti2@uw.edu>  
**Subject:** FW: A message to the IACUC

Hi, Joe—There was never any intention to mislead anyone, and we corrected the record soon after discovering the mistake, prior to receipt of LJE's letter this morning. The message below was sent out to all IACUC members and alternates yesterday morning, along with the corrected Benefit Story that will be posted with the meeting minutes (reattached here). Shortly after sending the email to the IACUC, I sent a similarly brief email with the corrected benefit story to Lisa. If anyone has any questions for me, please let me know and I will be happy to discuss this. Thank you, Jane

---

Jane M Sullivan, Ph.D.  
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---

**From:** Tony Nguyen <tonytn@uw.edu>

**Sent:** Monday, November 23, 2020 8:55 AM

**To:** Aaron J. Wirsing <wirsinga@uw.edu>; Andrew Burich <aburich@benaroyaresearch.org>; Carolyn M. Malinowski <cmali@uw.edu>; David L. Mack <dmack21@uw.edu>; Farrel R. Robinson <robinsn@uw.edu>; Garret Stuber <gstuber@uw.edu>; Jacqui Ague <jacqui.ague@seattlechildrens.org>; Jane Sullivan <jmsull@uw.edu>; Jeanot Muster <musterj@uw.edu>; Kathryn Guerriero <kag18@uw.edu>; Ken Gordon <executivedirector@nwabr.org>; Kim Stocking <kstock@uw.edu>; uworama <uworama@uw.edu>; Michael Krasik <motekinc@earthlink.net>; Michelle Brot <mbrot@uw.edu>; Molly K. Lucas <mklucas@uw.edu>; J.Preston Van Hooser <jpvh@uw.edu>; Scott Haskell <srrhaskell@gmail.com>; Steve Libby <slibby@uw.edu>  
**Cc:** achris08 <achris08@uw.edu>; Amber L. Fuller <aw656@uw.edu>; Ashley E. Williams <aew33@uw.edu>; Aubrey Schoenleben <aubreys@uw.edu>; Bob Ennes <ennes@uw.edu>; Robert D Murnane <rmurnane@uw.edu>; Charlotte E. Hotchkiss <chotchki@uw.edu>; Chris Braunger <chrisb44@uw.edu>; Daniel Eldridge <deldrid@uw.edu>; Dean Jeffery <daj12@uw.edu>; Eleanor Wade <ewade1@uw.edu>; Emily W. Clark <ewilkins@uw.edu>; George E. Sanders <gsander@uw.edu>; Jennifer Freeling Iwamoto <jpf2@uw.edu>; Judy L Cashman <judym@uw.edu>; Kelly Heffernan <ksh@uw.edu>; Kristin Zabrecky <zabrecky@uw.edu>; Leandra Mosca <lmosca@uw.edu>; Loren M Kinman <lorax@uw.edu>; Mariam W. Ashmawi <mariam18@uw.edu>; megellis <megellis@uw.edu>; Melissa Barker-Haliski <mhaliski@uw.edu>; Michael Oppenheimer <moppenh@uw.edu>; stephh26 <stephh26@uw.edu>

**Subject:** A message to the IACUC

Hello everyone,

Please see Jane's message below.

Thanks,  
Tony

Fellow members of the IACUC, I stand corrected. The Moderna vaccine is not the same as the Fuller lab vaccine. Please see the attached Benefit story, which will be posted with our November minutes. Thank you and take care, Jane

---

Jane M Sullivan, Ph.D.  
Associate Professor  
Dept. of Physiology & Biophysics  
University of Washington School of Medicine  
1705 NE Pacific St  
Box 357290  
Seattle, WA 98195

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**From:** Deborah L Fuller <fullerdh@uw.edu>  
**Sent:** Sunday, December 20, 2020 4:55 PM  
**To:** Sally Thompson-Iritani  
**Subject:** Re: letter response from PETA

Yes-absolutely.

Deb

---

**From:** Sally Thompson-Iritani <sti2@uw.edu>  
**Date:** Sunday, December 20, 2020 at 4:12 PM  
**To:** "fullerdh@uw.edu" <fullerdh@uw.edu>  
**Subject:** RE: letter response from PETA

Deb – are you ok if I share the comment about the Moderna with Tina? She got a question from a reporter.

Thank you -

Sally Thompson-Iritani, DVM/PhD, CPIA  
~ Certified Compassion Fatigue and Human-Animal Bond Practitioner ~  
**Director (Interim), WaNPRC**  
206.661.6294 /sti2@uw.edu

*'As staff at the University of Washington, I acknowledge the peoples – past, present, and future – of the Dkhw'Duw'Absh, the Duwamish Tribe, the Muckleshoot Tribe, and other Coast Salish peoples on whose traditional lands and waters I work.'*

---

**From:** Deborah L Fuller <fullerdh@uw.edu>  
**Sent:** Saturday, December 19, 2020 10:22 PM  
**To:** Sally Thompson-Iritani <sti2@uw.edu>  
**Cc:** Shiu-Lok Hu <hus@uw.edu>; Kiem, Hans-Peter <hkiem@fredhutch.org>; Dorothy Patton <dpatton@uw.edu>; Rodney J Ho <rodneyho@uw.edu>; Michael J Gale <mgale@uw.edu>; Sean C. Murphy <murphysc@uw.edu>; Kim A. Woodrow <woodrow@uw.edu>; Peterson PhD, Christopher W <cwpeters@fredhutch.org>; Megan A O'Connor <meganoc@uw.edu>; Lynn Law <glaw@uw.edu>; Sandra Dross <sdross@uw.edu>  
**Subject:** Re: letter response from PETA

Hi Sally, I'm going to call in our core faculty and affiliates who have been involved in HIV and malaria research to help with this response (Shiu-Lok, Hans-Peter, Chris, Dorothy, Rodney, Mike, Sean, Kim, Megan, Lynn, Sandra and anyone else they would like to loop in) since this letter is pertinent to their work.

**All – to help in the response to this letter, could each of you send to Sally and me (by Monday) a bulleted list of 1-5 key advances that you or your collaborators have made via NHP studies at UW to advance the prevention and treatment of HIV and malaria, including citations?** (i.e. antiretroviral drugs, drug/vaccine delivery, pre-exposure prophylaxis, immunotherapies, advances in understanding what is needed to make an effective prophylactic or therapeutic and the development of NHP models to test them). Your help will be very much appreciated.

In response to the statement: "And are you aware that a member of UW's IACUC falsely claimed in a public meeting recently that UW was involved in the testing of the Moderna vaccine?", see below:

UW has been very much involved in testing Moderna's vaccine and in developing the next generation of COVID-19 vaccines (including a vaccine that was developed in my lab). Dr. Lisa Jackson (Research Professor in UW School of Public Health) was the principal investigator in Moderna's phase I human clinical trial. Anna Wald (Professor, UW Medicine) is also leading clinical trials at Harborview. Jane knew this and she also knew my lab was developing an improved mRNA vaccine that will be tested in human trials soon with Dr. Lisa Jackson leading that study. It's hard to keep them all straight and Jane's error is perfectly understandable. There is no doubt that UW is playing a major role in testing not just Moderna's vaccine but other COVID19 vaccines and therapies, including our second generation mRNA vaccine that was tested in nonhuman primates and based on those studies, we believe could be superior to Moderna's and Pfizer's in its greater stability at room temperature and potential to induce protective immunity in a single shot.

PETA's harping on Jane's mistake (in stating my lab helped to develop the Moderna vaccine) when she has already issued a correction is an example of harassment and misrepresentation. It's false and insulting to say that UW was not involved in testing the Moderna's vaccine without clarifying the context.

Deb

Deborah Fuller, Ph.D  
Professor, Department of Microbiology  
University of Washington School of Medicine  
Division Chief, Infectious Diseases and Translational Medicine  
Washington National Primate Research Center  
PO Box 358070  
750 Republican St.  
Seattle WA, 98109  
Ph: 206-897-6197  
Cell: 518-588-4826

---

**From:** Sally Thompson-Iritani <sti2@uw.edu>

**Date:** Saturday, December 19, 2020 at 7:23 PM

**To:** "fullerdh@uw.edu" <fullerdh@uw.edu>

**Subject:** letter response from PETA

Hi Deb –

I'm sorry to bother you with this - I just wanted to share this response back to the letter from AMC to PETA and see if you have anything that I should share when this is discussed regarding this sentence:

*'It is untrue that UW has made "important, timely contributions in the development of vaccines" for HIV and malaria because there are no vaccines for these diseases despite the millions of dollars and thousands of monkeys that have been used up.'*

I know that things are being taken out of context but I want to be sure that I provide information if it is asked. Also – as you can see they continue to focus on the mistake that Jane Sullivan made in the IACUC meeting.

Thank you –

*Sally Thompson-Iritani, DVM/PhD, CPIA*

~ Certified Compassion Fatigue and Human-Animal Bond Practitioner ~

**Director (Interim), WaNPRC**

206.661.6294 /sti2@uw.edu



**Thank you to the NIH Office of Research Infrastructure Programs grant P51 OD010425 and U42OD011123 for supporting WaNPRC.**

***\*Please help us continue to support your research by citing our grant number in publications.\****

***'As staff at the University of Washington, I acknowledge the peoples – past, present, and future – of the Dkhw'Duw'Absh, the Duwamish Tribe, the Muckleshoot Tribe, and other Coast Salish peoples on whose traditional lands and waters I work.'***

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**From:** [Sally Thompson-Iritani](#)  
**To:** [Tina M. Mankowski](#)  
**Subject:** Re: [mediarelations] FW: New Scientist magazine re IACUC covid vaccine claims story  
**Date:** Friday, December 18, 2020 4:49:03 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)

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Also - maybe ask if he wants to talk about bullying, harassment and intimidation of people who take care of the animals used to support research. That could be an interesting story -

Thank you ~

Sally Thompson-Iritani, DVM/PhD, CPIA  
~ *Certified Compassion Fatigue and Human-Animal Bond Practitioner* ~  
Director (Interim) WaNPRC; 206.661.6294  
University of Washington, Seattle, WA  
*All typos courtesy of iPhone autocorrect*

On Dec 18, 2020, at 2:56 PM, Sally Thompson-Iritani <sti2@uw.edu> wrote:

Hi Tina – I put some notes below in blue. Is this really a story? You can just send them the corrected minutes.

*Thank you -*

*Sally Thompson-Iritani, DVM/PhD, CPIA*  
*~ Certified Compassion Fatigue and Human-Animal Bond Practitioner ~*  
**Director (Interim), WaNPRC**  
206.661.6294 / [sti2@uw.edu](mailto:sti2@uw.edu)

*'As staff at the University of Washington, I acknowledge the peoples – past, present, and future – of the Dkhw'Duw'Absh, the Duwamish Tribe, the Muckleshoot Tribe, and other Coast Salish peoples on whose traditional lands and waters I work.'*

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**From:** Tina M. Mankowski <ochs@uw.edu>  
**Sent:** Friday, December 18, 2020 2:04 PM  
**To:** Sally Thompson-Iritani <sti2@uw.edu>  
**Subject:** RE: [mediarelations] FW: New Scientist magazine re IACUC covid vaccine claims story  
**Importance:** High

See the question below and my answers. If these answers are correct, I can put this into a lucid statement. Thanks!

**Tina Mankowski**  
<[image001.png](#)>  
**Senior Director, Internal Communications & Media Relations**

Strategic Marketing & Communications | UW

---

**From:** mediarelations [mailto:mediarelations-bounces@mailman12.u.washington.edu] **On Behalf Of** UW News  
**Sent:** Friday, December 18, 2020 12:20 PM  
**To:** 'mediarelations@uw.edu'  
**Subject:** [mediarelations] FW: New Scientist magazine re IACUC covid vaccine claims story

---

**From:** Adam Vaughan <adam.vaughan@newscientist.com>  
**Sent:** Friday, December 18, 2020 6:03 AM  
**To:** UW News <uwnews@uw.edu>  
**Subject:** New Scientist magazine re IACUC covid vaccine claims story

Dear UW press office,

I'm a journalist at New Scientist magazine in the UK.

I'm writing regarding a request for comment and background on a story I'm exploring that relates to UW's primate centre, WaNPRC.

A video of a 19 November meeting of IACUC has been brought to my attention, which appears to show the committee's chair misleadingly conflating work on Deborah Fuller's vaccine with Moderna's vaccine. In the video I've seen, she says: "So first I want to update you about the Fuller Labs' novel RNA based vaccine which I told you about in August. This is the Moderna [covid] vaccine...").

My questions are:

- did WaNPRC have any role in the development of Moderna's vaccine? No
- was the chair reading from a prepared statement, or speaking off the cuff? The chair was not reading from a prepared statement and her comment regarding Moderna and the Washington National Primate Center was made in error. The Chair does prepare her own benefit stories and reads those.
- do you agree she conflated the two vaccines, Moderna's and Fuller's? Again, the statement was made in error and the chair has acknowledged her error and apologized. The statement was made in error and a correction went out to all IACUC members following the meeting. We can attached the corrected minutes.
- was the conflation of the two vaccines deliberate, or a mistake? The statement was made in error. IT WAS MISTAKE
- do you know how many people were watching her talk on 19 November, and who? We don't know exactly who or how many people typically watch our Institutional Animal Care and Use Committee meetings. They are open to the general public and we know that ~~animal rights organizations~~ are among those watching the proceedings. IACUC members we have a tally. **Extremists that are opposed to animal research** – maybe 10-12.
- what is the status of research on the Fuller Labs' vaccine? [Need to find out] check with Deb



I'm working to a deadline of 4pm GMT on Monday.

Look forward to hearing from you.

Best,

Adam

**Adam Vaughan** | Chief Reporter

T [+442076111216](tel:+442076111216)

E [adam.vaughan@newscientist.com](mailto:adam.vaughan@newscientist.com)

<image002.png>

<image003.jpg>

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**From:** Jane Sullivan <jmsull@uw.edu>  
**Sent:** Monday, November 23, 2020 8:21 AM  
**To:** Ashley E. Williams; Kim Stocking; Bob Ennes  
**Cc:** Tony Nguyen; stephh26  
**Subject:** RE: November IACUC Meeting Minutes Draft

Thank you, Ashley. I made a single change to the minutes, a revision to the correction to my benefit story. Thank you, Jane

---

Jane M Sullivan, Ph.D.  
Associate Professor  
Dept. of Physiology & Biophysics  
University of Washington School of Medicine  
1705 NE Pacific St  
Box 357290  
Seattle, WA 98195

Office G413 Ph. (206) 543-4038  
Lab H204 Ph. (206) 685-9424

---

**From:** Ashley E. Williams <aew33@uw.edu>  
**Sent:** Friday, November 20, 2020 2:58 PM  
**To:** Kim Stocking <kstock@uw.edu>; Jane Sullivan <jmsull@uw.edu>; Bob Ennes <ennes@uw.edu>  
**Cc:** Tony Nguyen <tonytn@uw.edu>; stephh26 <stephh26@uw.edu>  
**Subject:** November IACUC Meeting Minutes Draft

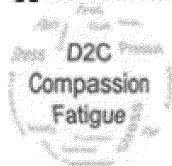
Hi all,

Happy Friday! The draft November 19, 2020 IACUC Minutes are now ready for your review. Thank you and have a great weekend!

Sincerely,  
**Ashley Williams**  
Administrative Specialist  
Office of Animal Welfare Research Support Services

Health Sciences Building Box 357160  
1705 NE Pacific Street Seattle, WA 98195-7160  
206.685.7363 fax 206.616.1297  
[auts@uw.edu](mailto:auts@uw.edu) / [oaw.washington.edu](http://oaw.washington.edu)

**W** UNIVERSITY of WASHINGTON



*Dare 2 Care...* | explore UW's Compassion Fatigue Program

**From:** Jane Sullivan <jmsull@uw.edu>  
**Sent:** Monday, November 23, 2020 9:15 AM  
**To:** Dr. Lisa Jones-Engel  
**Subject:** RE: Fuller vaccine  
**Attachments:** Benefit Story November 2020.docx

Dear Lisa—I stand corrected. The Moderna vaccine is not the same as the Fuller lab vaccine. I am attaching the Benefit Story that we will post with the meeting minutes, where I make that clear. Take care, Jane

---

Jane M Sullivan, Ph.D.  
Associate Professor  
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University of Washington School of Medicine  
1705 NE Pacific St  
Box 357290  
Seattle, WA 98195

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---

**From:** Dr. Lisa Jones-Engel <LisaJE@peta.org>  
**Sent:** Thursday, November 19, 2020 3:58 PM  
**To:** Jane Sullivan <jmsull@uw.edu>  
**Subject:** Fuller vaccine

Jane—

It sounded to me like you said that Deb Fuller's preclinical study back in Mar/April, which repurposed 5 of the monkeys from her Hepatitis study, was directly responsible for the Moderna vaccine. Did I misunderstand you?

**Lisa Jones-Engel, PhD**  
Senior Science Advisor, Primate Experimentation  
Laboratory Investigations Department  
People for the Ethical Treatment of Animals  
[LisaJE@peta.org](mailto:LisaJE@peta.org)  
206.372.6190

I am again going to focus this month's benefit story on local efforts to develop a Covid vaccine. First, I want to update you about the Fuller lab's novel RNA-based vaccine, which I told you about in August. This is the Moderna vaccine, which was reported earlier this week to be 94.5% effective in Phase 3 clinical trials that ran in parallel with the monkey research. [*Correction: the Fuller lab vaccine is not the same as the Moderna vaccine.*] This is tremendously exciting news.

I think most of you are aware, though, that the global goal is to identify a variety of vaccines with different properties, and so the need for further vaccine testing continues.

Neil King's lab, working in collaboration with many fellow UW researchers, has very recently reported their findings on a different kind of vaccine in the journal *Cell*. The King group began by generating a computer model that predicts the 3-dimensional shape of the part of the SARS-CoV-2 virus where it binds to ACE2, the naturally occurring cell-surface protein that serves as an entry receptor for the virus. This allowed the researchers to predict the part of SARS-CoV-2 where antibody binding could most effectively block binding to ACE2, and thus block entry of the virus into cells.

The key concept here is that exposure to the isolated protein binding domain, which on its own does not cause disease, triggers the production of antibodies that will attach to the binding domain and prevent infection by the virus upon exposure. In vitro studies showed that simultaneously presenting multiple copies of the binding domain was much more effective at triggering antibody production than individual binding domains. This led the researchers to create so-called 'nanobodies' that are composed of aggregates of recombinant SARS-CoV-2 binding domain protein.

When these nanobodies were injected intramuscularly into mice, they rapidly elicited antibodies at levels that matched or exceeded the levels found in humans with COVID. Seven weeks after immunization, *all* the mice injected with the nanobodies were **completely protected** from detectable virus replication in the lungs and nasal tissue, and high antibody titers persisted undiminished out to 24 weeks.

Follow up studies in mice with humanized immune systems provided additional confidence that the nanobodies would work in people, but a final experiment tested the ability of the nanobodies to elicit antibodies in a single non-human primate. Eight weeks after immunization, the monkey's serum contained high levels of antibodies that could inhibit binding of virus to ACE2 in an in vitro assay. I do want to emphasize that there was no virus challenge for the monkey, and also that **none** of the monkeys at the UW primate center have tested positive for COVID.

The benefits of nanobody vaccines include their track record for safety and their potency, which means a little can go a long way. Nanobody vaccines are also amenable to large-scale manufacturing, which is particularly important during a global pandemic. I am excited to see how this new nanobody vaccine performs in clinical trials.

Walls et al., 'Elicitation of Potent Neutralizing Antibody Responses by Designed Protein Nanoparticle Vaccines for SARS-CoV-2' *Cell* 183: 1-16 (2020)

**From:** Jane Sullivan <jmsull@uw.edu>  
**Sent:** Tuesday, November 24, 2020 10:28 AM  
**To:** Joe Giffels  
**Cc:** Kim Stocking; Sally Thompson-Iritani  
**Subject:** RE: A message to the IACUC

Thanks, Joe. That was certainly my intention. Take care, Jane

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**Cc:** Kim Stocking <kstock@uw.edu>; Sally Thompson-Iritani <sti2@uw.edu>  
**Subject:** RE: A message to the IACUC

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Joe

JOE GIFFELS

---

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**From:** Tony Nguyen <tonytn@uw.edu>

**Sent:** Monday, November 23, 2020 8:55 AM

**To:** Aaron J. Wirsing <wirsinga@uw.edu>; Andrew Burich <aburich@benaroyaresearch.org>; Carolyn M. Malinowski <cmali@uw.edu>; David L. Mack <dmack21@uw.edu>; Farrel R. Robinson <robinsn@uw.edu>; Garret Stuber <gstuber@uw.edu>; Jacqui Ague <jacqui.ague@seattlechildrens.org>; Jane Sullivan <jmsull@uw.edu>; Jeanot Muster <musterj@uw.edu>; Kathryn Guerriero <kag18@uw.edu>; Ken Gordon <executivedirector@nwabr.org>; Kim Stocking <kstock@uw.edu>; uworama <uworama@uw.edu>; Michael Krasik <motekinc@earthlink.net>; Michelle Brot <mbrot@uw.edu>; Molly K. Lucas <mklucas@uw.edu>; J.Preston Van Hooser <jpvh@uw.edu>; Scott Haskell <srrhaskell@gmail.com>; Steve Libby <slibby@uw.edu>  
**Cc:** achris08 <achris08@uw.edu>; Amber L. Fuller <aw656@uw.edu>; Ashley E. Williams <aew33@uw.edu>; Aubrey Schoenleben <aubreys@uw.edu>; Bob Ennes <ennes@uw.edu>; Robert D Murnane <rmurnane@uw.edu>; Charlotte E. Hotchkiss <chotchki@uw.edu>; Chris Braunger <chrisb44@uw.edu>; Daniel Eldridge <deldrid@uw.edu>; Dean Jeffery <daj12@uw.edu>; Eleanor Wade <ewade1@uw.edu>; Emily W. Clark <ewilkins@uw.edu>; George E. Sanders <gsander@uw.edu>; Jennifer Freeling Iwamoto <jpf2@uw.edu>; Judy L Cashman <judym@uw.edu>; Kelly Heffernan <ksh@uw.edu>; Kristin Zabrecky <zabrecky@uw.edu>; Leandra Mosca <lmosca@uw.edu>; Loren M Kinman <lorax@uw.edu>; Mariam W. Ashmawi <mariam18@uw.edu>; megellis <megellis@uw.edu>; Melissa Barker-Haliski <mhaliski@uw.edu>; Michael Oppenheimer <moppenh@uw.edu>; stephh26 <stephh26@uw.edu>

**Subject:** A message to the IACUC

Hello everyone,

Please see Jane's message below.

Thanks,  
Tony

Fellow members of the IACUC, I stand corrected. The Moderna vaccine is not the same as the Fuller lab vaccine. Please see the attached Benefit story, which will be posted with our November minutes. Thank you and take care, Jane

---

Jane M Sullivan, Ph.D.  
Associate Professor  
Dept. of Physiology & Biophysics  
University of Washington School of Medicine  
1705 NE Pacific St  
Box 357290  
Seattle, WA 98195

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Lab H204 Ph. (206) 685-9424

**From:** Jane Sullivan <jmsull@uw.edu>  
**Sent:** Monday, November 23, 2020 9:12 AM  
**To:** Tony Nguyen  
**Subject:** RE: A message to the IACUC

Thank you, Tony.

---

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**From:** Jane Sullivan <jmsull@uw.edu>  
**Sent:** Tuesday, November 24, 2020 8:43 AM  
**To:** Joe Giffels; Sally Thompson-Iritani; Kim Stocking  
**Subject:** FW: Dishonest claim made at an official University of Washington meeting regarding the development of Moderna's COVID-19 vaccine  
**Attachments:** 2020\_11\_24 Letter to Office of Research Integrity Regarding Univ Washington Vaccine Statement.pdf

And so it begins...

---

Jane M Sullivan, Ph.D.  
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---

**From:** Dr. Lisa Jones-Engel <LisaJE@peta.org>  
**Sent:** Tuesday, November 24, 2020 8:41 AM  
**To:** Elisabeth.Handley@hhs.gov  
**Subject:** RE: Dishonest claim made at an official University of Washington meeting regarding the development of Moderna's COVID-19 vaccine

November 24, 2020

Elisabeth Handley  
Director  
Office of Research Integrity  
Department of Health and Human Services  
1101 Wootton Pkwy, Suite 240

Via e-mail: [Elisabeth.Handley@hhs.gov](mailto:Elisabeth.Handley@hhs.gov)

RE: Dishonest claim made at an official University of Washington meeting regarding the development of Moderna's COVID-19 vaccine

Dear Ms. Handley:

I hope this correspondence, written on behalf of People for the Ethical Treatment of Animals (PETA) and our more than 6.5 million members and supporters, finds you well. Prior to joining the staff at PETA, I was a Senior Research Scientist at the Washington National Primate Research Center (WaNPRC) at the University of Washington (UW) and then served for two years on UW's Institutional Animal Care and Use Committee (IACUC)—the committee charged with ensuring ethical treatment of animals in the university's laboratories. At PETA, I serve as Senior Science Advisor of Primate Experimentation, and it was in this capacity that I attended the virtual meeting of the UW IACUC on November 19, 2020.

At this meeting, Jane Sullivan, the UW IACUC Chair, made a dishonest claim that experiments carried out on pigtail macaques by Deborah Fuller, a UW/WaNPRC investigator, were directly responsible for the development of Moderna's vaccine for Covid-19. As I had been following news of the Moderna and other vaccines, I was aware that this claim was incorrect—and at the meeting, I requested clarification on this point. Dr. Sullivan refused to correct her statement and directed me to look at the IACUC meeting “minutes when the story is published.”

However, in a follow-up email exchange with Dr. Sullivan, she recanted and agreed that the Moderna vaccine was not the same as the Fuller lab vaccine.

Misstatements, inappropriate representations, and out and out falsehoods—particularly when they occur in the context of issues as

sensitive as COVID-19 vaccines—are an egregious violation of the public trust. And if the misstatements made by Dr. Sullivan were made deliberately or at the behest of WaNPRC leadership hoping to scuttle concerns about mistreatment of primates in its laboratories, I believe this should be investigated.

I therefore respectfully request that you look into this matter. I would be happy to answer any questions you may have.

Thank you for your time and consideration.

Sincerely,



Lisa Jones-Engel, Ph.D.  
Senior Science Advisor of Primate Experimentation  
Laboratory Investigations Department  
People for the Ethical Treatment of Animals

Cc:

Stéphane Bancel, Chief Executive Officer, Moderna, Inc  
Stephen Hoge, President, Moderna, Inc  
Tal Zaks, Chief Medical Officer, Moderna, Inc  
Ana Marie Cauce, President, University of Washington (UW)  
Mark Richards, Provost and Executive Vice President, UW  
Mary E. Lidstrom, Vice Provost for Research, UW  
Joe Giffels, Associate Vice Provost for Research Administration & Integrity; Institutional Official, UW  
Paul Ramsey, CEO; Executive Vice President for Medical Affairs; Dean, School of Medicine, UW  
Deborah Fuller, Professor, UW  
Jane Sullivan, Chair, Institutional Animal Care and Use Committee, UW  
Kim Stocking, Director, Office of Animal Welfare; Attending Veterinarian, UW  
Sally Thompson-Iritani, Interim Director, Washington National Primate Research Center, UW  
Nate Fulton, Board of Trustees, UW  
Ben Franz-Knight, Board of Trustees, UW  
Kris Lambright, Board of Trustees, UW  
Erin McCallum, Board of Trustees, UW  
Amit D. Ranade, Board of Trustees, UW  
Paul Rucker, Board of Trustees, UW  
William S. Ayer, Board of Regents, UW  
Joel Benoliel, Board of Regents, UW  
Joanne R. Harrell, Board of Regents, UW  
Jeremy Jaech, Board of Regents, UW  
Libby G. MacPhee, Board of Regents, UW  
Kristina Pogolian, Board of Regents, UW  
Constance W. Rice, Board of Regents, UW  
Rogelio Riojas, Board of Regents, UW  
Blaine Tamaki, Board of Regents, UW  
David Zeeck, Board of Regents, UW

AN INTERNATIONAL ORGANIZATION DEDICATED TO PROTECTING THE RIGHTS OF ALL ANIMALS

**PETA**PEOPLE FOR  
THE ETHICAL  
TREATMENT  
OF ANIMALS

November 24, 2020

Elisabeth Handley  
Director  
Office of Research Integrity  
Department of Health and Human Services  
1101 Wootton Pkwy, Suite 240

Via e-mail: [Elisabeth.Handley@hhs.gov](mailto:Elisabeth.Handley@hhs.gov)

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1536 16th St. N.W.  
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202-483-PETA

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323-644-PETA

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2855 Telegraph Ave.  
Ste. 301  
Berkeley, CA 94705  
510-763-PETA

[Info@peta.org](mailto:Info@peta.org)  
[PETA.org](http://PETA.org)

## Affiliates:

- PETA Asia
- PETA India
- PETA France
- PETA Australia
- PETA Germany
- PETA Netherlands
- PETA Foundation (U.K.)

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Joe Giffels, Associate Vice Provost for Research Administration & Integrity; Institutional Official, UW  
Paul Ramsey, CEO; Executive Vice President for Medical Affairs; Dean, School of Medicine, UW  
Deborah Fuller, Professor, UW  
Jane Sullivan, Chair, Institutional Animal Care and Use Committee, UW  
Kim Stocking, Director, Office of Animal Welfare; Attending Veterinarian, UW  
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Constance W. Rice, Board of Regents, UW  
Rogelio Riojas, Board of Regents, UW  
Blaine Tamaki, Board of Regents, UW  
David Zeeck, Board of Regents, UW

**From:** Jane Sullivan <jmsull@uw.edu>  
**Sent:** Tuesday, November 24, 2020 10:09 AM  
**To:** Joe Giffels  
**Cc:** Kim Stocking; Sally Thompson-Iritani  
**Subject:** FW: A message to the IACUC  
**Attachments:** Benefit Story November 2020.docx

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I am again going to focus this month's benefit story on local efforts to develop a Covid vaccine. First, I want to update you about the Fuller lab's novel RNA-based vaccine, which I told you about in August. This is the Moderna vaccine, which was reported earlier this week to be 94.5% effective in Phase 3 clinical trials that ran in parallel with the monkey research. [*Correction: the Fuller lab vaccine is not the same as the Moderna vaccine.*] This is tremendously exciting news.

I think most of you are aware, though, that the global goal is to identify a variety of vaccines with different properties, and so the need for further vaccine testing continues.

Neil King's lab, working in collaboration with many fellow UW researchers, has very recently reported their findings on a different kind of vaccine in the journal *Cell*. The King group began by generating a computer model that predicts the 3-dimensional shape of the part of the SARS-CoV-2 virus where it binds to ACE2, the naturally occurring cell-surface protein that serves as an entry receptor for the virus. This allowed the researchers to predict the part of SARS-CoV-2 where antibody binding could most effectively block binding to ACE2, and thus block entry of the virus into cells.

The key concept here is that exposure to the isolated protein binding domain, which on its own does not cause disease, triggers the production of antibodies that will attach to the binding domain and prevent infection by the virus upon exposure. In vitro studies showed that simultaneously presenting multiple copies of the binding domain was much more effective at triggering antibody production than individual binding domains. This led the researchers to create so-called 'nanobodies' that are composed of aggregates of recombinant SARS-CoV-2 binding domain protein.

When these nanobodies were injected intramuscularly into mice, they rapidly elicited antibodies at levels that matched or exceeded the levels found in humans with COVID. Seven weeks after immunization, *all* the mice injected with the nanobodies were **completely protected** from detectable virus replication in the lungs and nasal tissue, and high antibody titers persisted undiminished out to 24 weeks.

Follow up studies in mice with humanized immune systems provided additional confidence that the nanobodies would work in people, but a final experiment tested the ability of the nanobodies to elicit antibodies in a single non-human primate. Eight weeks after immunization, the monkey's serum contained high levels of antibodies that could inhibit binding of virus to ACE2 in an in vitro assay. I do want to emphasize that there was no virus challenge for the monkey, and also that **none** of the monkeys at the UW primate center have tested positive for COVID.

The benefits of nanobody vaccines include their track record for safety and their potency, which means a little can go a long way. Nanobody vaccines are also amenable to large-scale manufacturing, which is particularly important during a global pandemic. I am excited to see how this new nanobody vaccine performs in clinical trials.

Walls et al., 'Elicitation of Potent Neutralizing Antibody Responses by Designed Protein Nanoparticle Vaccines for SARS-CoV-2' *Cell* 183: 1-16 (2020)



**From:** Jane Sullivan <jmsull@uw.edu>  
**Sent:** Monday, November 23, 2020 8:32 AM  
**To:** Tony Nguyen  
**Cc:** Kim Stocking; Bob Ennes  
**Subject:** a message to the IACUC  
**Attachments:** Benefit Story November 2020.docx

Good morning, Tony. Can you please remove my message to you and then forward the email below, including the attachment, to the IACUC? I want to be sure they are aware of the correction to the benefit story before I send it to Lisa. Thank you, Jane

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**From:** Joe Giffels <jgiffels@uw.edu>  
**Sent:** Tuesday, November 24, 2020 10:21 AM  
**To:** Jane Sullivan  
**Cc:** Kim Stocking; Sally Thompson-Iritani  
**Subject:** RE: A message to the IACUC

Thanks very much, Jane. In my opinion, you took timely and appropriate measures.

Joe

JOE GIFFELS

---

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**Sent:** Tuesday, November 24, 2020 10:09 AM  
**To:** Joe Giffels <jgiffels@uw.edu>  
**Cc:** Kim Stocking <kstock@uw.edu>; Sally Thompson-Iritani <sti2@uw.edu>  
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**Sent:** Monday, November 23, 2020 8:55 AM  
**To:** Aaron J. Wirsing <wirsinga@uw.edu>; Andrew Burich <aburich@benaroyaresearch.org>; Carolyn M. Malinowski <cmali@uw.edu>; David L. Mack <dmack21@uw.edu>; Farrel R. Robinson <robinsn@uw.edu>; Garret Stuber <gstuber@uw.edu>; Jacqui Ague <jacqui.ague@seattlechildrens.org>; Jane Sullivan <jmsull@uw.edu>; Jeanot Muster <musterj@uw.edu>; Kathryn Guerriero <kag18@uw.edu>; Ken Gordon <executivedirector@nwabr.org>; Kim Stocking <kstock@uw.edu>; uworama <uworama@uw.edu>; Michael Krasik <motekinc@earthlink.net>; Michelle Brot <mbrot@uw.edu>; Molly K. Lucas <mklucas@uw.edu>; J.Preston Van Hooser <jpvh@uw.edu>; Scott Haskell <srhaskell@gmail.com>; Steve Libby <slibby@uw.edu>  
**Cc:** achris08 <achris08@uw.edu>; Amber L. Fuller <aw656@uw.edu>; Ashley E. Williams <aeuw33@uw.edu>; Aubrey Schoenleben <aubreys@uw.edu>; Bob Ennes <ennes@uw.edu>; Robert D Murnane <rmurnane@uw.edu>; Charlotte E. Hotchkiss <chotchki@uw.edu>; Chris Braunger <chrisb44@uw.edu>; Daniel Eldridge <deldrid@uw.edu>; Dean Jeffery <daj12@uw.edu>; Eleanor Wade <ewade1@uw.edu>; Emily W. Clark <ewilkins@uw.edu>; George E. Sanders <gsander@uw.edu>; Jennifer Freeling Iwamoto <jpf2@uw.edu>; Judy L

Cashman <[judym@uw.edu](mailto:judym@uw.edu)>; Kelly Heffernan <[ksh@uw.edu](mailto:ksh@uw.edu)>; Kristin Zabrecky <[zabrecky@uw.edu](mailto:zabrecky@uw.edu)>; Leandra Mosca <[lmosca@uw.edu](mailto:lmosca@uw.edu)>; Loren M Kinman <[lorax@uw.edu](mailto:lorax@uw.edu)>; Mariam W. Ashmawi <[mariam18@uw.edu](mailto:mariam18@uw.edu)>; megellis <[megellis@uw.edu](mailto:megellis@uw.edu)>; Melissa Barker-Haliski <[mhaliski@uw.edu](mailto:mhaliski@uw.edu)>; Michael Oppenheimer <[moppenh@uw.edu](mailto:moppenh@uw.edu)>; stephh26 <[stephh26@uw.edu](mailto:stephh26@uw.edu)>

**Subject:** A message to the IACUC

Hello everyone,

Please see Jane's message below.

Thanks,  
Tony

Fellow members of the IACUC, I stand corrected. The Moderna vaccine is not the same as the Fuller lab vaccine. Please see the attached Benefit story, which will be posted with our November minutes. Thank you and take care, Jane

-----  
Jane M Sullivan, Ph.D.  
Associate Professor  
Dept. of Physiology & Biophysics  
University of Washington School of Medicine  
1705 NE Pacific St  
Box 357290  
Seattle, WA 98195

Office G413 Ph. (206) 543-4038  
Lab H204 Ph. (206) 685-9424

**From:** Dr. Lisa Jones-Engel <LisaJE@peta.org>  
**Sent:** Tuesday, November 24, 2020 8:41 AM  
**To:** Elisabeth.Handley@hhs.gov  
**Subject:** RE: Dishonest claim made at an official University of Washington meeting regarding the development of Moderna's COVID-19 vaccine  
**Attachments:** 2020\_11\_24 Letter to Office of Research Integrity Regarding Univ Washington Vaccine Statement.pdf

November 24, 2020

Elisabeth Handley  
Director  
Office of Research Integrity  
Department of Health and Human Services  
1101 Wootton Pkwy, Suite 240

Via e-mail: [Elisabeth.Handley@hhs.gov](mailto:Elisabeth.Handley@hhs.gov)

RE: Dishonest claim made at an official University of Washington meeting regarding the development of Moderna's COVID-19 vaccine

Dear Ms. Handley:

I hope this correspondence, written on behalf of People for the Ethical Treatment of Animals (PETA) and our more than 6.5 million members and supporters, finds you well. Prior to joining the staff at PETA, I was a Senior Research Scientist at the Washington National Primate Research Center (WaNPRC) at the University of Washington (UW) and then served for two years on UW's Institutional Animal Care and Use Committee (IACUC)—the committee charged with ensuring ethical treatment of animals in the university's laboratories. At PETA, I serve as Senior Science Advisor of Primate Experimentation, and it was in this capacity that I attended the virtual meeting of the UW IACUC on November 19, 2020.

At this meeting, Jane Sullivan, the UW IACUC Chair, made a dishonest claim that experiments carried out on pigtail macaques by Deborah Fuller, a UW/WaNPRC investigator, were directly responsible for the development of Moderna's vaccine for Covid-19. As I had been following news of the Moderna and other vaccines, I was aware that this claim was incorrect—and at the meeting, I requested clarification on this point. Dr. Sullivan refused to correct her statement and directed me to look at the IACUC meeting "minutes when the story is published."

However, in a follow-up email exchange with Dr. Sullivan, she recanted and agreed that the Moderna vaccine was not the same as the Fuller lab vaccine.

Misstatements, inappropriate representations, and out and out falsehoods—particularly when they occur in the context of issues as

sensitive as COVID-19 vaccines—are an egregious violation of the public trust. And if the misstatements made by Dr. Sullivan were made deliberately or at the behest of WaNPRC leadership hoping to scuttle concerns about mistreatment of primates in its laboratories, I believe this should be investigated.

I therefore respectfully request that you look into this matter. I would be happy to answer any questions you may have.

Thank you for your time and consideration.

Sincerely,



Lisa Jones-Engel, Ph.D.  
Senior Science Advisor of Primate Experimentation  
Laboratory Investigations Department  
People for the Ethical Treatment of Animals

Cc:

Stéphane Bancel, Chief Executive Officer, Moderna, Inc  
Stephen Hoge, President, Moderna, Inc  
Tal Zaks, Chief Medical Officer, Moderna, Inc  
Ana Marie Cauce, President, University of Washington (UW)  
Mark Richards, Provost and Executive Vice President, UW  
Mary E. Lidstrom, Vice Provost for Research, UW  
Joe Giffels, Associate Vice Provost for Research Administration & Integrity; Institutional Official, UW  
Paul Ramsey, CEO; Executive Vice President for Medical Affairs; Dean, School of Medicine, UW  
Deborah Fuller, Professor, UW  
Jane Sullivan, Chair, Institutional Animal Care and Use Committee, UW  
Kim Stocking, Director, Office of Animal Welfare; Attending Veterinarian, UW  
Sally Thompson-Iritani, Interim Director, Washington National Primate Research Center, UW  
Nate Fulton, Board of Trustees, UW  
Ben Franz-Knight, Board of Trustees, UW  
Kris Lambright, Board of Trustees, UW  
Erin McCallum, Board of Trustees, UW  
Amit D. Ranade, Board of Trustees, UW  
Paul Rucker, Board of Trustees, UW  
William S. Ayer, Board of Regents, UW  
Joel Benoliel, Board of Regents, UW  
Joanne R. Harrell, Board of Regents, UW  
Jeremy Jaech, Board of Regents, UW  
Libby G. MacPhee, Board of Regents, UW  
Kristina Pogolian, Board of Regents, UW  
Constance W. Rice, Board of Regents, UW  
Rogelio Riojas, Board of Regents, UW  
Blaine Tamaki, Board of Regents, UW  
David Zeeck, Board of Regents, UW

AN INTERNATIONAL ORGANIZATION DEDICATED TO PROTECTING THE RIGHTS OF ALL ANIMALS



PEOPLE FOR  
THE ETHICAL  
TREATMENT  
OF ANIMALS

November 24, 2020

Elisabeth Handley  
Director  
Office of Research Integrity  
Department of Health and Human Services  
1101 Wootton Pkwy, Suite 240

Via e-mail: [Elisabeth.Handley@hhs.gov](mailto:Elisabeth.Handley@hhs.gov)

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Washington, D.C.  
1536 16th St. N.W.  
Washington, DC 20036  
202-483-PETA

Los Angeles  
2154 W. Sunset Blvd.  
Los Angeles, CA 90026  
323-644-PETA

Norfolk  
501 Front St.  
Norfolk, VA 23510  
757-622-PETA

Berkeley  
2855 Telegraph Ave.  
Ste. 301  
Berkeley, CA 94705  
510-763-PETA

[Info@peta.org](mailto:Info@peta.org)  
[PETA.org](http://PETA.org)

Affiliates:

- PETA Asia
- PETA India
- PETA France
- PETA Australia
- PETA Germany
- PETA Netherlands
- PETA Foundation (U.K.)

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People for the Ethical Treatment of Animals

Cc:

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Stephen Hoge, President, Moderna, Inc  
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Joe Giffels, Associate Vice Provost for Research Administration & Integrity; Institutional Official, UW  
Paul Ramsey, CEO; Executive Vice President for Medical Affairs; Dean, School of Medicine, UW  
Deborah Fuller, Professor, UW  
Jane Sullivan, Chair, Institutional Animal Care and Use Committee, UW  
Kim Stocking, Director, Office of Animal Welfare; Attending Veterinarian, UW  
Sally Thompson-Iritani, Interim Director, Washington National Primate Research Center, UW  
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Paul Rucker, Board of Trustees, UW  
William S. Ayer, Board of Regents, UW  
Joel Benoliel, Board of Regents, UW  
Joanne R. Harrell, Board of Regents, UW  
Jeremy Jaech, Board of Regents, UW  
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Kristina Pogolian, Board of Regents, UW  
Constance W. Rice, Board of Regents, UW  
Rogelio Riojas, Board of Regents, UW  
Blaine Tamaki, Board of Regents, UW  
David Zeeck, Board of Regents, UW



**From:** Tony Nguyen <tonytn@uw.edu>  
**Sent:** Monday, November 23, 2020 9:31 AM  
**To:** Jane Sullivan  
**Subject:** RE: A message to the IACUC

Jane, you're welcome!

---

**From:** Jane Sullivan [mailto:jmsull@uw.edu]  
**Sent:** Monday, November 23, 2020 9:12 AM  
**To:** Tony Nguyen <tonytn@uw.edu>  
**Subject:** RE: A message to the IACUC

Thank you, Tony.

---

Jane M Sullivan, Ph.D.  
Associate Professor  
Dept. of Physiology & Biophysics  
University of Washington School of Medicine  
1705 NE Pacific St  
Box 357290  
Seattle, WA 98195

Office G413 Ph. (206) 543-4038  
Lab H204 Ph. (206) 685-9424

---

**From:** Tony Nguyen <tonytn@uw.edu>  
**Sent:** Monday, November 23, 2020 8:55 AM  
**To:** Aaron J. Wirsing <wirsinga@uw.edu>; Andrew Burich <aburich@benaroyaresearch.org>; Carolyn M. Malinowski <cmali@uw.edu>; David L. Mack <dmack21@uw.edu>; Farrel R. Robinson <robinsn@uw.edu>; Garret Stuber <gstuber@uw.edu>; Jacqui Ague <jacqui.ague@seattlechildrens.org>; Jane Sullivan <jmsull@uw.edu>; Jeanot Muster <musterj@uw.edu>; Kathryn Guerriero <kag18@uw.edu>; Ken Gordon <executivedirector@nwabr.org>; Kim Stocking <kstock@uw.edu>; uworama <uworama@uw.edu>; Michael Krasik <motekinc@earthlink.net>; Michelle Brot <mbrot@uw.edu>; Molly K. Lucas <mklucas@uw.edu>; J.Preston Van Hooser <jpvh@uw.edu>; Scott Haskell <srrhaskell@gmail.com>; Steve Libby <slibby@uw.edu>  
**Cc:** achris08 <achris08@uw.edu>; Amber L. Fuller <aw656@uw.edu>; Ashley E. Williams <aew33@uw.edu>; Aubrey Schoenleben <aubreys@uw.edu>; Bob Ennes <ennes@uw.edu>; Robert D Murnane <rmurnane@uw.edu>; Charlotte E. Hotchkiss <chotchki@uw.edu>; Chris Braunger <chrisb44@uw.edu>; Daniel Eldridge <deldrid@uw.edu>; Dean Jeffery <daj12@uw.edu>; Eleanor Wade <ewade1@uw.edu>; Emily W. Clark <ewilkins@uw.edu>; George E. Sanders <gsander@uw.edu>; Jennifer Freeling Iwamoto <jpf2@uw.edu>; Judy L Cashman <judym@uw.edu>; Kelly Heffernan <ksh@uw.edu>; Kristin Zabrecky <zabrecky@uw.edu>; Leandra Mosca <lmosca@uw.edu>; Loren M Kinman <lorax@uw.edu>; Mariam W. Ashmawi <mariam18@uw.edu>; megellis <megellis@uw.edu>; Melissa Barker-Haliski <mhaliski@uw.edu>; Michael Oppenheimer <moppenh@uw.edu>; stephh26 <stephh26@uw.edu>  
**Subject:** A message to the IACUC

Hello everyone,

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Jane M Sullivan, Ph.D.  
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University of Washington School of Medicine  
1705 NE Pacific St  
Box 357290  
Seattle, WA 98195

Office G413 Ph. (206) 543-4038  
Lab H204 Ph. (206) 685-9424

**From:** Tony Nguyen <tonytn@uw.edu>  
**Sent:** Monday, November 23, 2020 8:55 AM  
**To:** Aaron J. Wirsing; Andrew Burich; Carolyn M. Malinowski; David L. Mack; Farrel R. Robinson; Garret Stuber; Jacqui Ague; Jane Sullivan; Jeanot Muster; Kathryn Guerriero; Gordon, Kenneth; Kim Stocking; uworama; Michael Krasik; Michelle Brot; mklucas; J.Preston Van Hooser; Scott Haskell; Steve Libby  
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**Subject:** A message to the IACUC  
**Attachments:** Benefit Story November 2020.docx

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Jane M Sullivan, Ph.D.  
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University of Washington School of Medicine  
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Seattle, WA 98195

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I am again going to focus this month's benefit story on local efforts to develop a Covid vaccine. First, I want to update you about the Fuller lab's novel RNA-based vaccine, which I told you about in August. This is the Moderna vaccine, which was reported earlier this week to be 94.5% effective in Phase 3 clinical trials that ran in parallel with the monkey research. [*Correction: the Fuller lab vaccine is not the same as the Moderna vaccine.*] This is tremendously exciting news.

I think most of you are aware, though, that the global goal is to identify a variety of vaccines with different properties, and so the need for further vaccine testing continues.

Neil King's lab, working in collaboration with many fellow UW researchers, has very recently reported their findings on a different kind of vaccine in the journal *Cell*. The King group began by generating a computer model that predicts the 3-dimensional shape of the part of the SARS-CoV-2 virus where it binds to ACE2, the naturally occurring cell-surface protein that serves as an entry receptor for the virus. This allowed the researchers to predict the part of SARS-CoV-2 where antibody binding could most effectively block binding to ACE2, and thus block entry of the virus into cells.

The key concept here is that exposure to the isolated protein binding domain, which on its own does not cause disease, triggers the production of antibodies that will attach to the binding domain and prevent infection by the virus upon exposure. In vitro studies showed that simultaneously presenting multiple copies of the binding domain was much more effective at triggering antibody production than individual binding domains. This led the researchers to create so-called 'nanobodies' that are composed of aggregates of recombinant SARS-CoV-2 binding domain protein.

When these nanobodies were injected intramuscularly into mice, they rapidly elicited antibodies at levels that matched or exceeded the levels found in humans with COVID. Seven weeks after immunization, *all* the mice injected with the nanobodies were **completely protected** from detectable virus replication in the lungs and nasal tissue, and high antibody titers persisted undiminished out to 24 weeks.

Follow up studies in mice with humanized immune systems provided additional confidence that the nanobodies would work in people, but a final experiment tested the ability of the nanobodies to elicit antibodies in a single non-human primate. Eight weeks after immunization, the monkey's serum contained high levels of antibodies that could inhibit binding of virus to ACE2 in an in vitro assay. I do want to emphasize that there was no virus challenge for the monkey, and also that **none** of the monkeys at the UW primate center have tested positive for COVID.

The benefits of nanobody vaccines include their track record for safety and their potency, which means a little can go a long way. Nanobody vaccines are also amenable to large-scale manufacturing, which is particularly important during a global pandemic. I am excited to see how this new nanobody vaccine performs in clinical trials.

Walls et al., 'Elicitation of Potent Neutralizing Antibody Responses by Designed Protein Nanoparticle Vaccines for SARS-CoV-2' *Cell* 183: 1-16 (2020)

**From:** Dr. Lisa Jones-Engel <LisaJE@peta.org>  
**Sent:** Thursday, November 19, 2020 3:58 PM  
**To:** Jane Sullivan  
**Subject:** Fuller vaccine

Jane—

It sounded to me like you said that Deb Fuller's preclinical study back in Mar/April, which repurposed 5 of the monkeys from her Hepatitis study, was directly responsible for the Moderna vaccine. Did I misunderstand you?

**Lisa Jones-Engel, PhD**

Senior Science Advisor, Primate Experimentation

Laboratory Investigations Department

People for the Ethical Treatment of Animals

[LisaJE@peta.org](mailto:LisaJE@peta.org)

206.372.6190

I am again going to focus this month's benefit story on local efforts to develop a Covid vaccine. First, I want to update you about the Fuller lab's novel RNA-based vaccine, which I told you about in August. This is the Moderna vaccine, which was reported earlier this week to be 94.5% effective in Phase 3 clinical trials that ran in parallel with the monkey research. [*Correction: the Fuller lab vaccine is not the same as the Moderna vaccine.*] This is tremendously exciting news.

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